

APPENDIX A**LIST OF COMMENTERS****(1) Comments on the Second NPRM**

1. AirTouch [AirTouch Communications, Inc.]
 2. Alliance [Ad Hoc Alliance for Public Access to 911]
 3. Ameritech [Ameritech Corporation]
 4. AMTA [American Mobile Telecommunications Association, Inc.]
 5. APCO [Association of Public-Safety Communications Officials International, Inc.]
 6. APT [American Portable Telecom, Inc.]
 7. ART [Associated RT, Inc.]
 8. AT&T [AT&T Wireless Services, Inc.]
 9. BANM [Bell Atlantic NYNEX Mobile, Inc.]
 10. CTIA [Cellular Telecommunications Industry Association]
 11. E.F.Johnson [E.F.Johnson Company]
 12. Ericsson [Ericsson Inc.]
 13. Garmin [Garmin International, Inc.]
 14. GTE [GTE Service Corporation]
 15. Harris-GCSD [Harris Government Communications Systems Division]
 16. IAFC and IMSA [International Association of Fire Chiefs, Inc. and the International Municipal Signal Association]
 17. KSI [KSI Inc. and MULCO Inc.]
 18. Lucent [Lucent Technologies]
 19. NAD [National Association of the Deaf]
 20. NASNA [National Association of State Nine-One-One Administrators]
 21. Nextel [Nextel Communications, Inc.]
 22. NENA [National Emergency Number Association]
 23. Nokia [Nokia Telecommunications, Inc.]
 24. OETS [New Jersey Office of Emergency Telecommunications Services]
 25. Omnipoint [Omnipoint Communications, Inc.]
 26. PCIA [Personal Communications Industry Association]
 27. Raytheon [Raytheon E-Systems]
 28. RTG [Rural Telecommunications Group]
 29. SBMS [Southwestern Bell Mobile Systems, Inc.]
 30. Tendler [Tendler Cellular]
 31. TIA [Telecommunications Industry Association]
 32. TX-ACSEC [Texas Advisory Commission on State Emergency Communications]
 33. 360 Communications Company
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(2) Reply Comments on the Second NPRM

1. Alliance [Ad Hoc Alliance for Public Access to 911]
2. Ameritech [Ameritech Corporation]
3. AMTA [American Mobile Telecommunications Associations, Inc.]
4. AT&T [AT&T Wireless Services, Inc.]
5. Chicago [City of Chicago]
6. CTIA [Cellular Telecommunications Industry Association]
7. Ericsson [Ericsson, Inc.]
8. Joint Commenters [NENA, APCO, NASNA]
9. KSI [KSI Inc. and MULOC Inc.]
10. Motorola [Motorola, Inc.]
11. Nextel [Nextel Communications, Inc.]
12. Nokia [Nokia Telecommunications, Inc.]
13. Omnipoint [Omnipoint Communications, Inc.]
14. PCIA [Personal Communications Industry Association]
15. RCA [Rural Cellular Association]
16. SBMS [Southwestern Bell Mobile Systems, Inc.]
17. SCC [SCC Communications Corporation]
18. TX-ACSEC [Texas Advisory Commission on State Emergency Communications]

(3) Comments and Reply Comments on the Alliance's Petition for Rulemaking

1. AT&T (AT&T Wireless Services, Inc.)
2. BANM (Bell Atlantic NYNEX Mobile, Inc.)
3. BellSouth (BellSouth Corporation and BellSouth Cellular Corporation)
4. CTIA (Cellular Telecommunications Industry Association)
5. Carolina West (North Carolina RSA3 Cellular Telephone Company)
6. PBMS (Pacific Bell Mobile Services)
7. PCIA (Personal Communications Industry Association)
8. RCA (Rural Cellular Association)
9. SBMS (Southwestern Bell Mobile Systems, Inc.)

**(4) Comments in Response to the September 22 Public Notice (Filed October 7, 1998)
(Additional Comments)**

1. AirTouch (AirTouch Communications, Inc.)
2. Ameritech (Ameritech Mobile Communications, Inc.)
3. AT&T (AT&T Wireless Services, Inc.)
4. BAM (Bell Atlantic Mobile, Inc.)
5. BellSouth (BellSouth Corporation)

6. CTIA (Cellular Telecommunications Industry Association)
7. RTG (Rural Telecommunications Group)
8. SBC (SBC Wireless, Inc.)
9. Texas 911 Providers (Texas Advisory Commission on State Emergency Communications; The Greater Harris County 911 Emergency Network; The Tarrant County 911 District; the Brazos County 911 District; and the CENCO Area 911 District)
10. TruePosition
11. USCC (United States Cellular Corporation)

(5) Reply Comments in Response to the September 22 Public Notice (Filed October 19, 1998) (Additional Reply Comments)

1. Alliance (Ad Hoc Alliance for Public Access to 911)
2. Corsair (Corsair Communications, Inc.)
3. ICSA (Independent Cellular Services Association)
4. Motorola (Motorola, Inc.)
5. Omnipoint (Omnipoint Communications, Inc.)
6. PCIA (Personal Communications Industry Association)
7. Public Safety (NENA, APCO, and NASNA)
8. RCA (Rural Cellular Association)
9. SBC Wireless (SBC Wireless Inc.)

APPENDIX B**FINAL RULES**

Part 22 of Title 47 of the Code of Federal Regulations is amended as follows:

Part 22 - PUBLIC MOBILE SERVICES

1. New Section 22.921 is added to read as follows:

§22.921 911 Call Processing Procedures

911-Only Calling Mode All mobile phones manufactured after [nine months after adoption of the order] and capable of operating in an analog mode, *i.e.*, in compliance with "Cellular System Mobile Station - Land Station Compatibility Specification" (April 1981 Ed.) Office of Engineering and Technology Bulletin No. 53, pursuant to § 22.933 of the Commission's Rules, must incorporate a special procedure for processing "9-1-1" calls. Such procedure must recognize when a "9-1-1" call is made and, at such time, must override any programming in the mobile unit that determines the handling of a non-911 call and permit the call to be handled by other analog carriers. This special procedure must incorporate any one or more of the 9-1-1 call system selection processes endorsed or approved by the Commission.

APPENDIX C

Final Regulatory Flexibility Analysis

As required by the Regulatory Flexibility Act, (RFA),¹ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the Further Notice of Proposed Rulemaking (Further NPRM) in this proceeding.² The Commission sought written public comments on the proposals in the Second NPRM, including comment on the IRFA. The Commission's Final Regulatory Flexibility Analysis (FRFA) in this Second Report and Order (Second R&O) conforms to the RFA³

I. Need for and Objectives of Action

The Second NPRM in this proceeding raised several issues of importance to improving E911 service. One issue in the Second NPRM considered proposals to help improve the transmission of 911 calls, particularly in geographic areas where a wireless 911 call could be delayed by "blank spots" where the system's radio signal is very weak or non-existent. A petition filed by the Ad Hoc Alliance for Public Access, proposing that the Commission require that all 911 calls be sent to the cellular system with the strongest control channel signal, was put out for comment at that time. The Commission sought comment on the Alliance's proposal and, more broadly, on ways to enable mobile users to complete 911 calls without regard to the geographic availability of the system or technology used by their wireless service. The Second R&O is needed to resolve these issues raised in the Second NPRM and is intended as an additional step toward improving both basic and enhance 911 wireless services and to ensure that critical 911 wireless service is offered in the most efficient, dependable way technologically feasible.

II. Summary of Significant Issues raised by the Public Comments in Response to Initial Regulatory Flexibility Statement

No comments were submitted in direct response to the Initial Regulatory Flexibility Act. However, the Commission made every effort to gather as much data as possible on the

¹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §601 *et. seq.*, has been amended by the Contract with America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat.847(1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

² See Further Notice at 11 FCC Rcd at 18764.

³ See 5 U.S.C. § 604.

issues considered in the Second R&O, and general comments received in response to the Second NPRM established an extensive record on which the decisions reached in the Second R&O were based. The Commission does not believe that a large number of manufacturers affected by the actions adopted in the Second R&O would be considered small businesses as defined by the Small Business Administration.

III. Description and Estimate of Small Entities Subject to the Rules

To estimate the number of small entities that may be affected by the possible significant economic impact of our present action, we first consider the definition of "small entity" under the RFA. The RFA generally defines "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."⁴ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.⁵ A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).⁶

Cellular Equipment Manufacturers. The actions taken in the Second R&O will chiefly apply to manufacturers of cellular equipment offering analog services or digital equipment also offering analog services. The Commission does not know how many cellular equipment manufacturers are in the current market, or how many equipment manufacturers are developing dual-mode handsets that can operate as an analog as well as a digital set. The 1994 County Business Patterns Report of the Bureau of the Census estimates that there are 920 companies that make communications subscriber equipment. This category includes not only cellular equipment manufacturers, but television and AM/FM radio manufacturers as well. Thus the number of cellular equipment manufacturers is considerably lower than 920, and the number of cellular manufacturers producing equipment that can be used in analog mode is lower than that. Under SBA regulations, a "communications equipment manufacturer," which includes not only U.S. cellular equipment manufacturers but also firms that manufacture radio and television broadcasting and other communications equipment, must

⁴ *Id.* § 601(6).

⁵ *Id.* § 601(3) (incorporating by reference the definition of "small business concern" in Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

⁶ Small Business Act, 15 U.S.C. § 632.

have a total of 750 or fewer employees in order to qualify as a small business concern.⁷ Census Bureau data from 1992 indicate that at that time there were an estimated 858 such U.S. manufacturers and that 778 (91%) of these firms had 750 or fewer employees and would therefore be classified as small entities.⁸ Using our current estimate of cellular equipment manufacturers and the previous percentage estimate of small entities, we estimate that our current action may affect approximately 837 small cellular equipment manufacturers.

Cellular Carriers. Cellular carriers are also impacted by the Commission's decision in this proceeding. The Commission has also not developed a definition of small entities applicable to cellular licensees. Again, the definition of small entity is the definition under the SBA rules this time applicable to radiotelephone companies. This definition provides that a small entity is a radiotelephone company employing no more than 1,500 persons.⁹

The most reliable source of information regarding the total numbers of certain common carrier and related providers nationwide appears to be data the Commission publishes annually in its *Carrier Locator* report, derived from filings made in connection with the Telecommunications Relay Service (TRS).¹⁰ According to our most recent data, 804 companies reported that they are engaged in the provision of cellular services.¹¹ Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of Cellular Service Carriers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 804 small entity Cellular Service Carriers that might be affected by the actions taken in this Second R&O.

IV. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

The Second R&O adopts a rule requiring that analog cellular phone, manufactured more than nine months after the adoption date of the Order, include a separate capability for processing 911 calls that permits those calls to be handled, where necessary, by either cellular carrier in the area. The Second R&O also sets out guidelines for 911 call completion

⁷ 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) code 3663.

⁸ U.S. Dept. of Commerce, 1992 Census of Transportation, Communications and Utilities (issued May 1995), SIC code 3663 (estimate created by the Census Bureau under contract to the Office of Advocacy, SBA).

⁹ 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812.

¹⁰ FCC, *Carrier Locator: Interstate Service Providers*, Figure 1 (Jan. 1999).

¹¹ *Id.*

methods that satisfy our rule, approving three methods that have been proposed in the record, Automatic A/B Roaming-Intelligent Retry, Adequate/Strongest Signal, and Selective Retry. Any one of the three may be used. Alternative methods may be used to satisfy the Commission's Rules, provided that Commission approval is received for the alternative method. In this way, the Commission hopes to keep abreast of changing technology and alter its 911 rules whenever necessary to optimize the benefits of technology. Implementation of the rule will be achieved through an equipment manufacturing requirement and the Commission's equipment authorization process. The Second R&O also requires that any application for equipment authorization of an analog cellular telephone submitted six months after the adoption date of the Second R&O must include a statement and a description of the approved 911 call processing method used by the device.

Finally, the Second R&O suggests a voluntary program to educate users of analog phones with regard to capabilities of the A/B, B/A logic for 911 calls. The voluntary industry education program should also inform the users of the possibility that setting A/B, B/A as the default for analog handset could produce roaming charges.

V. Significant Alternatives to Proposed Rules Which Minimize Significant Economic Impact on Small Entities and Accomplish Stated Objectives

Three 911-only call processing modes were proposed in this proceeding. Two of these, Automatic A/B Roaming-Intelligent Retry (IR) and Adequate/Strongest Signal have been modified significantly to address concerns raised in the record. For example, to avoid critical delays in transmission time under the Automatic A/B Roaming-IR proposal, the Second R&O establishes time limits for providing customer feedback that 911 call processing is underway but not completed. The handset should seek to complete the call with the non-preferred cellular carrier if the preferred cellular carrier has not successfully deliver the call to the landline carrier within 17 seconds after the call is placed. To reduce the possibility of consumers abandoning their 911 calls, the Second R&O indicates that the feedback information should advise callers to continue waiting for this amount of time. The Commission could have adopted a mandatory program to educate users of analog phones with regard to capabilities of the A/B, B/A logic for 911 calls, but instead made this provision voluntary.

Also, the Commission considered specific requirements for 911 buttons to avoid accidental dialing of 911, but declined to take regulatory action and encouraged manufacturers to consider and address this issue in their designs.

One commenter proposed that if the Commission adopted both Adequate/Signal and Automatic A/B Roaming-IR, that handset manufacturers be required to offer both choices in each handset. The Commission denied this proposal, finding such a requirement unwarranted

and costly. The Second R&O, while not barring manufacturers from electing to incorporate more than one calling mode, or some combination of modes, indicates that implementation of any one of the approved 911 calling modes would improve 911 call completion.

Another commenter proposed a six month deadline for compliance with these regulations to implement a separate 911 call menu that includes an approved 911 call completion mode. The Second R&O adopted a nine month deadline to provide enough time for product and standards development or for thorough testing.

Finally, while approving the three 911 call completion modes, A/B Roaming-Intelligent Retry, Adequate Strongest Signal, and Selective Retry, the Second R&O also provided that carriers may incorporate a new or modified 911 call processing mode provided that they submit such requests to the Commission for approval.

Statement of Commissioner Gloria Tristani

on Adoption of the Second Report and Order

In the Matter of
Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency
Calling Systems

May 13, 1999

Today nearly 100,000 emergency calls will be made from a wireless phone. 70 calls a minute -- 70 calls to save a life, or stop a crime. Wireless networks have brought great benefits to the consumer, dramatically increasing access to our families and our work. But the sense of security we gain from having a wireless phone is often the main reason we invest in purchasing one. Given the vital safety role that wireless phones play, it is incumbent on the Commission and the carriers alike to ensure that we remove any artificial obstacles to the completion of *all* 911 calls.

By requiring new analog cellular phones to use the alternative cellular network, if necessary, to complete an emergency call, we do precisely that. In this Order we set forth principles for 911 completion, and approve three proposals that comply with these principles. I hope that this flexibility will allow carriers to adopt one or multiple methods best tailored to their network and the needs of their customers.

While each of these methods will result in a higher rate of call completion, I recognize that some calls will not go through. Our ruling will not affect the millions of handsets in use today. And portions of our country have no cellular coverage whatsoever. But this Order will aid those in rural and suburban areas, where coverage within each cell drops significantly from the urban average of 90%. In such instances, the consumer will receive the benefit of access to both networks to complete a 911 call. While I will continue to look for additional means to improve emergency access, I am pleased by the progress we make today.